

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings of claims in the application:

Claims 1-16 (Canceled).

Claim 17 (Currently Amended): A method for the synthesis of a phosphorus compound, comprising: compounds  
selected from the group consisting of aminodihalophosphines,  
diaminohalophosphines, triaminophosphines, phosphorous ester diamides, aminophosphines,  
diaminophosphines, phosphorous ester amide halides, aminophosphine halides and  
phosphonous ester halides  
wherein forming an acid is formed during said synthesis; the improvement  
comprising the step of  
reacting said acid and an auxiliary base to form a salt of the auxiliary base; said salt  
being liquid at temperatures at which the phosphorus compound is not significantly  
decomposed during the process of separating off the liquid salt;  
forming two immiscible liquid phases, a first phase comprising said salt of the  
auxiliary base and a second phase comprising said phosphorus compound or a solution of  
said phosphorus compound in a solvent; and  
separating said first phase from said second phase;  
eliminating said acid formed during said synthesis in the presence of an auxiliary  
base,  
wherein

b) ~~the auxiliary base and the acid form a salt which is liquid at temperatures at which the desired product is not significantly decomposed during the process of separating off the liquid salt and~~

e) ~~the salt of the auxiliary base forms two immiscible liquid phases with the desired product or the solution of the desired product in a suitable solvent~~

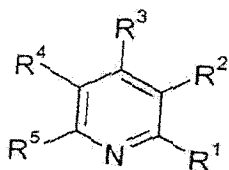
wherein said phosphorus compound is selected from the group consisting of aminodihalophosphines, diaminohalophosphines, triaminophosphines, phosphorous ester diamides, aminophosphines, diaminophosphines, phosphorous ester amide halides, aminophosphine halides and phosphonous ester halides.

Claim 18 (Previously Presented): The method as claimed in claim 17, wherein the salt of the auxiliary base has a melting point below 160°C.

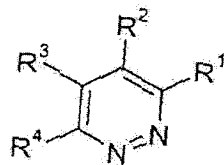
Claim 19 (Previously Presented): The method as claimed in claim 17, wherein the salt of the auxiliary base has an  $E_T(30)$  of more than 35.

Claim 20 (Previously Presented): The method as claimed in claim 17, wherein the base contains at least one nitrogen atom.

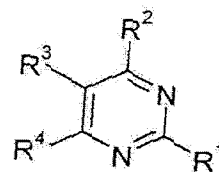
Claim 21 (Currently Amended): The method as claimed in claim 17, wherein the base used is selected from ~~among~~ the group consisting of compounds of the formulae (Ia) to (Ir),



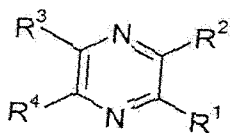
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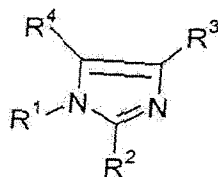
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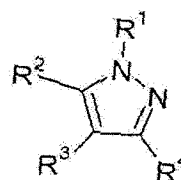
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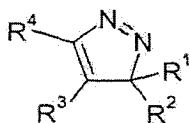
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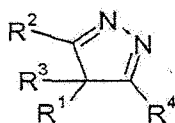
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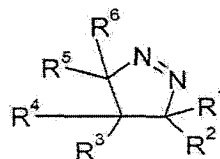
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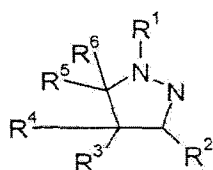
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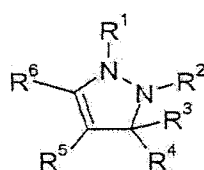
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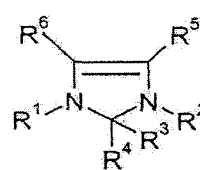
(i)



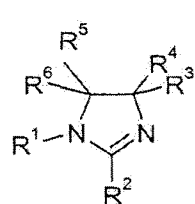
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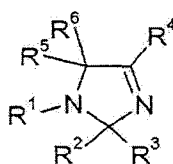
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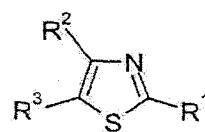
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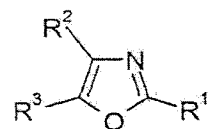
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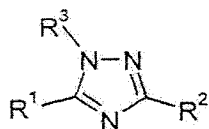
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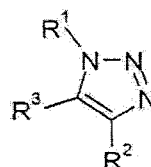
(o)



(p)



(q)



(r)

wherein

$R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each, independently of one another, hydrogen,  $C_1$ - $C_{18}$ -alkyl,  $C_2$ - $C_{18}$ -alkyl which may be interrupted by one or more oxygen and/or sulfur atoms and/or one or more substituted or unsubstituted imino groups,  $C_6$ - $C_{12}$ -aryl,  $C_5$ - $C_{12}$ -cycloalkyl

or a five- to six-membered, oxygen, nitrogen- and/or sulfur-containing heterocycle, ~~where~~ wherein each of the abovementioned radicals may be substituted by functional groups, aryl, alkyl, aryloxy, alkyloxy, halogen, heteroatoms and/or heterocycles.

Claim 22 (Previously Presented): The method as claimed in claim 17, wherein the auxiliary base is 1-n-butylimidazole, 1-methylimidazole, 2-methylpyridine or 2-ethylpyridine.

Claim 23 (Previously Presented): The method as claimed in claim 17, wherein the auxiliary base is di-n-butyl-n-pentylamine or 1,5-diazabicyclo[4.3.0]non-5-ene (DBN).

Claim 24 (Previously Presented): The method as claimed in claim 17, wherein the salt of the auxiliary base is soluble to an extent of less than 20% by weight in the desired product or in the solution of the desired product in a suitable solvent.

Claim 25 (Currently Amended): The method as claimed in claim 17, wherein  
diphosphorous diester amides ( $[N](R'O)P-O-Z-O-P[N'](OR'')$ ),  
diphosphorous ester diamides ( $[N][N']P-O-Z-O-P[N'']N'''$ ),  
bistriaminophosphines ( $[N][N']P-[N'']-Z-[N''']-P[N''''N''''']$ ),  
or systems of the formula

$[N](R'O)P-O-Z-O-P(OR'')(OR''')$ ,

$[N][N']P-O-Z-O-P(OR'')(OR''')$  or

$[N][N']P-O-Z-O-P[N''](OR''')$

or systems which are both nitrogen- and carbon-substituted on each phosphorus and have the formula

$[N](R')P-O-Z-O-P[N'](R''')$  or

$[N](R')P-[N'']-Z-[N''']-P[N'](R''')$

or systems of the formula

$[N](R'O)P-O-Z-O-P[N'](R''')$

are prepared,

where wherein R, R', R'' and R''' can be any organic radicals which may be identical or different, [N], [N'], [N''], [N'''], [N'''''] and [N'''''] are unsubstituted, monosubstituted or disubstituted amino groups which may be identical or different and Z can be any divalent bridge.

Claim 26 (Currently Amended): The method for preparing phosphorus compounds ~~from the appropriate starting materials~~ as set forth in claim 17, wherein the preparation is carried out continuously at from 30°C to 190°C and a residence time of from 1 second to 1 hour.

Claim 27 (Withdrawn): A method of removing acids from reaction mixtures comprising conducting said reaction in the presence of an auxiliary base, wherein

- b) the auxiliary base and the acid form a salt which is liquid at temperatures at which the desired product is not significantly decomposed during the process of separating off the liquid salt and
- c) the salt of the auxiliary base forms two immiscible liquid phases with the desired product or the solution of the desired product in a suitable solvent, and the desired product is firstly distilled off from the reaction mixture in the presence of the auxiliary base in the protonated form and the auxiliary base is

then set free by means of a strong base and the free auxiliary base is subsequently distilled.

Claim 28 (Withdrawn): A method of removing acids from reaction mixtures comprising conducting said reaction in the presence of an auxiliary base, wherein

- b) the auxiliary base and the acid form a salt which is liquid at temperatures at which the desired product is not significantly decomposed during the process of separating off the liquid salt and
- c) the salt of the auxiliary base forms two immiscible liquid phases with the desired product or the solution of the desired product in a suitable solvent, and the auxiliary base is firstly set free by means of a strong base and the free auxiliary base is subsequently distilled in the presence of the desired product and the desired product is then distilled.

Claim 29 (Withdrawn): A method of stopping acid-catalyzed reactions, comprising neutralizing the acid catalyst in a chemical reaction with an auxiliary base, wherein

- b) the auxiliary base and the acid form a salt which is liquid at temperatures at which the desired product is not significantly decomposed during the process of separating off the liquid salt and
- c) the salt of the auxiliary base forms two immiscible liquid phases with the desired product or the solution of the desired product in a suitable solvent.